Report of the International Stem Cell Banking Initiative Workshop Activity: Current Hurdles and Progress in Seed-Stock Banking of Human Pluripotent Stem Cells.

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Funding Grants: Generation and characterization of high-quality, footprint-free human induced pluripotent stem cell lines from 3,000 donors to investigate multigenic diseases

Public Summary:
In the past decade induced pluripotent stem cells (iPSC) have become an important research and clinical tool, and both research and clinical applications require carefully evaluation of identity, pluripotency, genomic integrity, function, and sterility. This paper describes the state-of-the-art as regards the characterization and quality control of iPSC lines. Multiple investigators from around the world contributed their experiences, including CIRM-funded scientists.

Scientific Abstract:
This article summarizes the recent activity of the International Stem Cell Banking Initiative (ISCBI) held at the California Institute for Regenerative Medicine (CIRM) in California (June 26, 2016) and the Korean National Institutes for Health in Korea (October 19-20, 2016). Through the workshops, ISCBI is endeavoring to support a new paradigm for human medicine using pluripotent stem cells (hPSC) for cell therapies. Priority considerations for ISCBI include ensuring the safety and efficacy of a final cell therapy product and quality assured source materials, such as stem cells and primary donor cells. To these ends, ISCBI aims to promote global harmonization on quality and safety control of stem cells for research and the development of starting materials for cell therapies, with regular workshops involving hPSC banking centers, biologists, and regulatory bodies. Here, we provide a brief overview of two such recent activities, with summaries of key issues raised. Stem Cells Translational Medicine 2017;6:1956-1962.